Fujitsu recommends Windows® 7.

Data Sheet
Fujitsu CELSIUS R920 Workstation

Uncompromising Workstation Performance for Extreme Requirements

Fujitsu´s most performing workstation the CELSIUS R920 achieving first-class benchmark results is designed to surpass all your expectations. This reliable, high-end dual processor workstation is individually configurable for the most power hungry, 24/7 operating environments. Best-in-class noise emissions of just 21 dB, and comprehensive ISV certifications that ensure smooth application operation, enhance your productivity. The convenient cold plug access at front simplifies subsequent expansion.

Performance
Higher productivity
- High performance multi-core processors, next generation graphics subsystems, quad-channel memory technology and high-speed hard disk drives

Ergonomics
Noise-reduced system engineered in Germany
- Optimized thermal management, low-noise chassis and silent fans

Reliability
System stability for the complete lifecycle
- High product standards thanks to top-quality components and comprehensive testing in certified in-house laboratories for 24/7 operation

Certification of workstation applications
Stability, compatibility and performance for the main workstation applications
- Comprehensive support for ISV applications and ease of integration into existing IT networks

Expandability
Excellent expandability for future demands
- Increased memory capacities of up to 512 GB

Components

Drives	up to 8x 2.5" HDDs or up to 4x 3.5" HDDs or up to 2x 2.5" and 2x 3.5" HDDs
Processor	Intel® Xeon® processor E5-2690 (8 Cores / 16 Threads, 2.90 GHz, up to 3.8 GHz, 20 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2687W (8 Cores / 16 Threads, 3.10 GHz, up to 3.8 GHz, 20 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2680 (8 Cores / 16 Threads, 2.70 GHz, up to 3.5 GHz, 20 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2670 (8 Cores / 16 Threads, 2.60 GHz, up to 3.3 GHz, 20 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2667 (6 Cores / 12 Threads, 2.90 GHz, up to 3.5 GHz, 15 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2665 (8 Cores / 16 Threads, 2.40 GHz, up to 3.1 GHz, 20 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2660 (8 Cores / 16 Threads, 2.20 GHz, up to 3.0 GHz, 20 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2650L (8 Cores / 16 Threads, 1.80 GHz, up to 2.3 GHz, 20 MB, 7.2 GT/s)
	Intel® Xeon® processor E5-2650 (8 Cores / 16 Threads, 2.00 GHz, up to 2.8 GHz, 20 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2643 (4 Cores / 8 Threads, 3.30 GHz, up to 3.5 GHz, 10 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2640 (6 Cores / 12 Threads, 2.50 GHz, up to 3.0 GHz, 15 MB, 7.2 GT/s)
	Intel® Xeon® processor E5-2637 (2 Cores / 4 Threads, 3.00 GHz, up to 3.2 GHz, 5 MB, 8.0 GT/s)
	Intel® Xeon® processor E5-2630L (6 Cores / 12 Threads, 2.00 GHz, up to 2.5 GHz, 15 MB, 6.4 GT/s)
	Intel® Xeon® processor E5-2630 (6 Cores / 12 Threads, 2.30 GHz, up to 2.8 GHz, 15 MB, 7.2 GT/s)
	Intel® Xeon® processor E5-2620 (6 Cores / 12 Threads, 2.00 GHz, up to 2.5 GHz, 15 MB, 7.2 GT/s)
	Intel® Xeon® processor E5-2609 (4 Cores / 8 Threads, 2.40 GHz, 10 MB, 6.4 GT/s)
	Intel® Xeon® processor E5-2603 (4 Cores / 8 Threads, 1.80 GHz, 10 MB, 6.4 GT/s)
Operating systems	
Operating system	Windows® 7 Professional 64-bit
Operating system compatible	Windows® XP Professional x64 Edition Windows® XP Professional Linux
Operating system notes	Red Hat® certification Red Hat® certification starting with version 6.2 Novell® certification pending For some configurations third party drivers are currently not available or configuration restrictions may apply. SCU ports are not supportet for Windows® XP 32bit (restriciton by Intel®). Therefore an additional storage controller (D2607 or D2616) is necessary.
Memory modules	2 GB (1 module(s) 2 GB) DDR3, ECC, 1600 MHz, PC3-12800
	4 GB (1 module(s) 4 GB) DDR3, ECC, 1600 MHz, PC3-12800
	4 GB (1 module(s) 4 GB) DDR3, registered, ECC, 1600 MHz, PC3-12800
	8 GB (1 module(s) 8 GB) DDR3, registered, ECC, 1600 MHz, PC3-12800
	16 GB (1 module(s) 16 GB) DDR3, registered, ECC, 1600 MHz, PC3-12800
	32 GB (1 module(s) 32 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600

Graphics add on cards (optional)	Ultra-high-end 3D: NVIDIA® Quadro® 6000, 6 GB, 448 cores, PCIe x16, 1x DVI-I, 2x DisplayPort
	Ultra-high-end 3D: NVIDIA® Quadro® K5000, 4 GB, 352 cores, PCIe x16, Dual Link DVI-I, DVI-D, 2x DisplayPort
	Ultra-high-end 3D: NVIDIA® Quadro® 5000, 2.5 GB, 352 cores, PCIe x16, Dual Link DVI-I, 2x DisplayPort
	High-end 3D: AMD FirePro™ W8000, 4 GB, 1140 stream processors, PCIe x16, 4 x DisplayPort
	High-end 3D: AMD FirePro™ W7000, 4 GB, 1140 stream processors, PCIe x16, 4 x DisplayPort
	High-end 3D: AMD FirePro™ V7900, 2 GB, 1140 stream processors, PCIe x16, 4 x DisplayPort
	High-end 3D: NVIDIA® Quadro® 4000, 2 GB, 256 cores, PCIe x16, Dual Link DVI-I, 2x DisplayPort
	Midrange 3D: NVIDIA® Quadro® 2000D, 1 GB, 192 cores, PCIe x16, 2x Dual Link DVI-I
	Midrange 3D: NVIDIA® Quadro® 2000, 1 GB, 192 cores, PCIe x16, Dual Link DVI-I, 2x DisplayPort
	Midrange 3D: AMD FirePro™ W5000, 2 GB, 800 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort
	Midrange 3D: AMD FirePro™ V5900, 2 GB, 800 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort
	Entry 3D: AMD FirePro™ V4900, 1 GB, 480 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort
	Entry 3D: NVIDIA® Quadro® 600, 1 GB, 96 cores, PCIe x16, Dual Link DVI-I, DisplayPort
	Entry 3D: AMD FirePro™ V3900, 1 GB, 480 stream processors, PCIe x16, Dual Link DVI-I, DisplayPort
	Entry 3D: NVIDIA® Quadro® 410, 512 MB, 192 cores, PCIe x16, 1x DVI-I, DisplayPort
	Professional 2D: NVIDIA® Quadro® NVS 450, 512 MB, 2 x 8 cores, PCIe x16, 4 x DisplayPort
	Professional 2D: NVIDIA® Quadro® NVS 300, 512 MB, 16 cores, PCIe Gen2 x16, 2x DVI/VGA
	Remote Graphics: CELSIUS RemoteAccess Card, PCIe x1, 2x DVI-I, PCoIP
	GPU computing card: NVIDIA® Tesla™ C2075, 6 GB, 448 cores, PCIe x16, 1x DVI-I
Hard disk drives (internal)	SSD SATA III, 512 GB, 2.5-inch
	SSD SATA III, 256 GB, 2.5-inch
	SSD SATA III, 128 GB, 2.5-inch, SED
	SSD SATA III, 128 GB, 2.5-inch
	SSD SATA, 256 GB, 2.5-inch, FDE
	SSD SATA, 128 GB, 2.5-inch, FDE
	HDD SATA III, 10000 rpm, 600 GB, 3.5-inch
	HDD SATA III, 10000 rpm, 600 GB, 2.5-inch
	HDD SATA III, 10000 rpm, 300 GB, 2.5-inch
	HDD SATA III, 7200 rpm, 2000 GB, 3.5-inch
	HDD SATA III, 7200 rpm, 1000 GB, 3.5-inch, business critical
	HDD SATA III, 7200 rpm, 1000 GB, 3.5-inch
	HDD SATA III, 7200 rpm, 500 GB, 3.5-inch, business critical
	HDD SATA III, 7200 rpm, 500 GB, 3.5-inch
	HDD SATA III, 7200 rpm, 250 GB, 3.5-inch
	HDD SATA II, 7200 rpm, 2000 GB, 3.5-inch, business critical
	HDD SAS, 15000 rpm, 300 GB, 2.5-inch
	HDD SAS, 10000 rpm, 600 GB, 2.5-inch
	HDD SAS, 10000 rpm, 450 GB, 2.5-inch
	HDD SAS, 10000 rpm, 300 GB, 2.5-inch
Hard disk notes	*Disk imaging software of the customer must be 4k sector size / advanced format ready One Gigabyte equals one billion bytes, when referring to hard disk drive capacity.
Drives (optional)	Blu-ray Disc™ Triple Writer
	DVD-ROM
	DVD Super Multi
	MCR 24in1 & USB 3.0 front con., 3.5"
	MultiCard Reader 24in1 USB 2.0 3.5"

Interface add on cards/components (optional)	
	WLAN III, 802.11g/Draft-n (Windows only)
	USB 3.0 PCIe x1
	InfiniBand HCA 40Gb/s, 2-Port, QDR
	InfiniBand HCA 40Gb/s, 1-Port, QDR
	Gigabit Ethernet PCIe x1, DS
	Gigabit Ethernet PCIe x1
	eSATA Interface
	Dual serial card PCIe x1, powered
	Dual serial card PCIe x1
	Dual 1 Gigabit Ethernet PCIe x4
	Dual 10 Gigabit Ethernet PCIe x8
Interface add on/component note	1x eSATA interface already on board

Base unit	CELSIUS R920	CELSIUS R920 power
Mainboard		
Mainboard type	D3118	
Formfactor	proprietary	
Chipset	Intel® C602	
Processor socket	Socket R	
Processor quantity maximum	2	
Memory slots	16 (8 per processor) DIMM (DDR3) registered	
Supported capacity RAM (max.)	512 GB	
Memory notes	In configurations with 4 GB and more the visible memory may be reduced to approximately 3.5 GB or less (for 32-bit operating systems) and configurations with 8 GB the visible memory may be reduced to approximately 7.5 GB or less (depending on system configuration). Large memory may lead to long boot times. When using a 32-bit operating system the maximum of memory might be 900 MB.	
LAN	2x Built-in 10/100/1000 MBit/s Intel® 82579 LM and Intel® 82574L	
Audio codec	Conexant CX20642	
Audio features	High Definition Audio	
I/O controller on board		
Serial ATA total	7	
thereof SATA III	2	
thereof eSATA	1	
SATA RAID support	0, 1, 10, 5	
SAS Controller type	optional upgrade to 8 ports, Intel C606	
SAS RAID support	0, 1, 10	
Interfaces		
Audio: in (rear)	1	
Audio: out (rear)	1	
Audio: in	1	
Audio: out	1	
Internal speakers	1	
USB 2.0 total	11	
USB 3.0 total	2	
USB front	4 (2x USB 3.0)	
USB rear	6	
USB internal	3, thereof 1 type A	
Serial (RS-232)	1 (internal 9 pin)	
Mouse / Keyboard (PS/2)	1 / 1	

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Interfaces		
Ethernet (RJ-45)	2	
eSATA	1	
Interface Module notes	Anytime USB charge functionality	
Drive bays		
Drive bays total	12	
2.5-inch bays	8	
3.5-inch internal bays	4	
3.5-inch external bays	2	
5.25-inch external bays	2	
Slots		
PCI-Express 3.0 x4 (mech. x16)	1 x (312 mm) Full height	
PCI-Express 3.0 x16	4 x (312 mm /) Full height (2x PCIe 3.0x16 per processor)	
PCI-Express 2.0 x4 (mech. x8)	1 x (140 mm) Full height	
PCI (32-bit / 33 MHz)	1 x (312 mm /) Full height	
Electrical values		
Power consumption note	400 W depending on configuration	550 W depending on configuration
Rated voltage range	100 V - 240 V	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz	50 Hz - 60 Hz
Operating voltage range	100 V - 240 V	100 V - 240 V
Operating line frequency range	50 Hz - 60 Hz	50 Hz - 60 Hz
Max. output of single power supply	800 W up to 90% efficiency	1100 W up to 90% efficiency
Power factor correction/active power	active	active
Noise emission	According to ISO9296 (LpAm at bystander position)	According to ISO9296 (LpAm at bystander position)
Noise Operation mode 4: High load	23 dB(A)	24 dB(A)
Noise Operation mode 5: Office applications	21 dB(A)	22 dB(A)
Idle mode	21 dB(A)	22 dB(A)
Office mode	21 dB(A)	22 dB(A)
Noise notes / description	depending on configuration	depending on configuration
Dimensions / Weight / Environmental		
Dimensions (W x D x H)	186 x 618 x 430 mm	
Operating position	Vertical / horizontal	
Weight	20 kg	
Weight notes	Actual weight may vary depending on configuration	
Operating ambient temperature	10 - 35°C	
Operating relative humidity	5 - 85 % (relative humidity)	
Compliance		
Product	CELSIUS R920	CELSIUS R920 Power
Model	ETNA_L-D3118	
Germany	GS depending on configuration	
USA/Canada	cCSAus FCC Class B FCC Class A (in combination with InfiniBand add on card)	
Global	RoHS (EU & China) Medical EMC standard IEC60601-1-2 in combination with medical kit Microsoft Operating Systems (HCT / HCL entry / WHQL) ENERGY STAR® 5.0 WEEE (Waste electrical and electronic equipment) EPEAT® in progress (dedicated regions)	
Japan	VCCI	

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Compliance	
Russia	GOST
South Korea	KCC
China	CCC (planned)
Taiwan	BSMI
Saudi Arabia	SASO (planned)
Compliance link	http://globalsp.ts.fujitsu.com/sites/certificates/default.aspx https://sp.ts.fujitsu.com/sites/certificates/
Security	
System protection	Kensington Lock support Eye for padlock Intrusion switch Optional: Integrated cabinet lock
Audit proof protection	Write protect option for the Flash EPROM Boot protection for floppy disk / CD drive and write protection for floppy disk drive Dynamic USB security for full hardware USB protection Control of all USB interfaces Trusted platform module (TPM 1.2) EraseDisk
Access protection	User and supervisor BIOS password Optional: Access protection via external SmartCard reader Optional: Access protection via internal SmartCard reader
Additional Software	
Additional software (preinstalled)	Norton Internet Security (incl. Firewall) 60 days version Microsoft® Office Starter: reduced-functionality Word and Excel® only, with advertising. No PowerPoint® or Outlook®. Buy Office 2010 to use the full-featured software.
Additional software (optional)	CyberLink PowerDVD BD (playback software for Blu-ray Disc™, only with Blu-ray Disc™ drive / Blu-ray playback is not supported under Windows XP if the system runs on Intel onboard graphics) Drivers & Utilities DVD (DUDVD) Windows® 7 and Windows® XP Nero Essentials (burning software)
Manageability	
Manageability technology	DeskUpdate Driver management iAMT Intel® Active Manageability Technology v7.1 (not activated, not set up)
Manageability software	DeskView Client DeskView Instant BIOS Management DeskView Integration for Symantec Management Platform
DeskView components	Inventory Management BIOS Management Driver Management Security Management Alarm Management
Supported standards	WMI BootP (made4you) PXE WoL (Wake on LAN)
Manageability link	http://ts.fujitsu.com/manageability
Input device / components	
	Optical USB wheel mouse
Input devices (optional)	Optical USB/PS2 tilt wheel mouse Space Explorer USB Keyboard
Warranty	
Standard Warranty	3 years (depending on country)
Maintenance and Support Services - the perfect extension	
Recommended Service	5x9, Response Time: Next Business Day

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Warranty	
Spare Parts availability	5 years
Service Weblink	http://www.fujitsu.com/fts/services/support

More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu CELSIUS R920, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio
Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products
www.fujitsu.com/global/services/computing/

Software
www.fujitsu.com/software/

More information

Learn more about Fujitsu CELSIUS R920, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/fts/CELSIUS

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.
Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.
Please find further information at http://www.fujitsu.com/global/about/environment/

Green Policy Innovation

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